

In the Claims

Claims 1-20 (Cancelled)

Claim 21 (Currently amended): An isolated conditionally immortal human hematopoietic stem cell, wherein said hematopoietic stem cell comprises an introduced oncogene that confers conditional immortality to said hematopoietic stem cell.

Claims 22-23 (Canceled)

Claim 24 (Currently amended): The isolated cell of claim 21, wherein ~~the conditional immortality is conferred to said cell by~~ said oncogene comprises a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 25 (Previously presented): The isolated cell of claim 24, wherein said oncogene encodes the SV40 T-antigen.

Claim 26 (Currently amended): A composition comprising isolated conditionally immortal human hematopoietic stem cells, wherein said hematopoietic stem cells comprise an introduced oncogene that confers conditional immortality to said hematopoietic stem cells.

Claims 27-28 (Canceled)

Claim 29 (Currently amended): The composition of claim 26, wherein ~~the conditional immortality is conferred to said cells by~~ said oncogene comprises a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 30 (Previously presented): The composition of claim 29, wherein said oncogene encodes the SV40 T-antigen.

Claim 31 (Currently amended): A method for treating a cognitive deficit associated with brain damage, comprising intracerebrally administering an effective amount of hematopoietic stem cells to a mammalian patient in need of such treatment, wherein said intracerebral administering results in improved cognitive function.

Claim 32 (Previously presented): The method of claim 31, wherein the brain damage comprises loss of brain cells caused by physical trauma, hypoxia, or a chemical agent.

Claim 33 (Previously presented): The method of claim 31, wherein the brain damage comprises loss of brain cells caused by traumatic brain injury, stroke, perinatal ischemia, or multi-infarct dementia.

Claim 34 (Previously presented): The method of claim 31, wherein the brain damage comprises loss of brain cells associated with a neurodegenerative disease.

Claim 35 (Previously presented): The method of claim 34, wherein the neurodegenerative disease is Alzheimer's disease.

Claim 36 (Previously presented): The method of claim 34, wherein the neurodegenerative disease is Parkinson's disease.

Claim 37 (Currently amended): The method of claim 31, wherein the hematopoietic stem cells are conditionally immortal, and wherein the conditional immortality is conferred to the hematopoietic stem cells by an introduced oncogene.

Claim 38 (Canceled)

Claim 39 (Currently amended): The method of ~~claim 31~~ claim 37, wherein the conditional immortality is conferred to the hematopoietic cells by a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 40 (Previously presented): The method of claim 39, wherein the oncogene encodes the SV40 T-antigen.

Claim 41 (Previously presented): The method of claim 31, wherein the hematopoietic stem cells are isolated.

Claim 42 (Previously presented): The method of claim 31, wherein the patient is human.

Claim 43 (Previously presented): The method of claim 42, wherein the hematopoietic stem cells are human cells.

Claims 44-45 (Cancelled)

Claim 46 (New): A method for treating brain damage, comprising intracerebrally administering an effective amount of hematopoietic stem cells to a mammalian patient in need of such treatment, wherein said administering results in improved brain function of said patient.

Claim 47 (New): The method of claim 46, wherein the brain damage is the result of hypoxia.

Claim 48 (New): The method of claim 46, wherein the hematopoietic stem cells are conditionally immortal, and wherein the conditional immortality is conferred to the hematopoietic stem cells by an introduced oncogene.

Claim 49 (New): The method of claim 46, wherein the hematopoietic stem cells are isolated.

Claim 50 (New): The method of claim 46, wherein the patient is human.

Claim 51 (New): The method of claim 46, wherein the hematopoietic stem cells are human cells.

Claim 52 (New): The method of claim 46, wherein the patient is human, and the hematopoietic stem cells are human cells.

Claim 53 (New): The method of claim 46, wherein the hematopoietic cells are administered to the damaged part of the brain.

Claim 54 (New): The method of claim 53, wherein the patient is human, and wherein the hematopoietic stem cells are human cells.

Claim 55 (New): The method of claim 54, wherein the hematopoietic stem cells are conditionally immortal, and wherein the conditional immortality is conferred to the hematopoietic stem cells by an introduced oncogene.

Claim 56 (New): The method of claim 54, wherein the hematopoietic stem cells are isolated.

Claim 57 (New): The isolated cell of claim 21, wherein said cell has been genetically transformed to express a heterologous therapeutic gene product.

Claim 58 (New): The composition of claim 26, wherein said cells have been genetically transformed to express a heterologous therapeutic gene product.